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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/936,510	09/24/1997	YONG BEOM KIM	8733.20056	9825

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/936,510

Applicant(s)

KIM, YONG BEOM

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) 1,4,14,16,20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,14,16,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/29/03 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

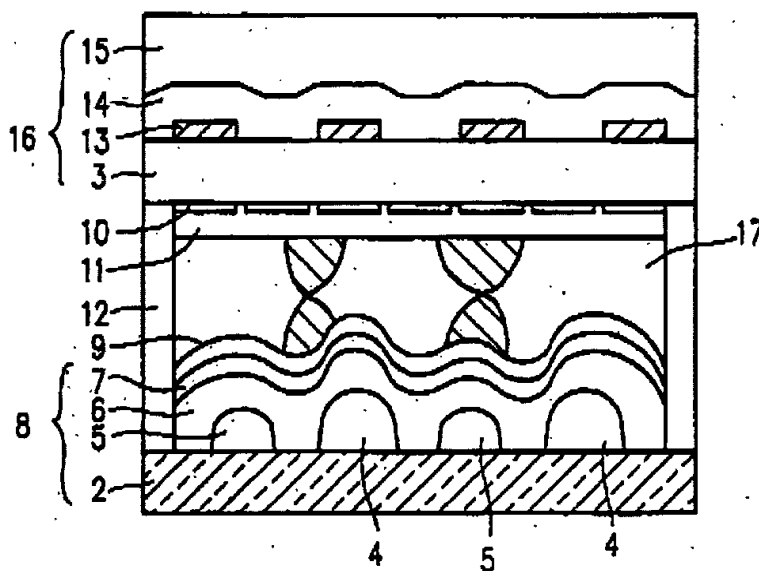
3. **Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Mitsui et al., (Mitsui), USPAT 5,559,617.**

4. Mitsui discloses and shows in Fig. 1, a reflection-type liquid crystal display device, comprising:

- first (2) and second (3) substrates;

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- a reflective electrode (7) over the first substrate (2), wherein the reflective electrode comprises metal such as aluminum, chromium etc. (applicant's opaque metal) (col. 5, lines 59-62);
- a liquid crystal layer (17) disposed interjacent the first and second substrates;
- two uniaxial optical compensation films (13,14) (col. 6, lines 11-13) of a same type (col. 10, lines 58-63; col. 12, lines 14-23) over the second substrate (3); and
- a first alignment layer (9) over the first substrate (2) (col. 6, lines 28-29).

FIG. 1

Accordingly, claim 1 is anticipated.

As to claim 14, since the method of manufacturing the device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsui in view of Arakawa, USPAT 5,189,538.

7. Mitsui differs from the claimed invention because he does not explicitly disclose that compensation films are positive-type.

Arakawa discloses a liquid crystal display having compensation films. Arakawa further discloses that by utilizing uniaxial compensation films of positive-type in a liquid crystal display, it is possible to widen the viewing angle (col. 3, lines 54-55; col. 4, lines 23-27).

Arakawa is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use uniaxial compensation films of positive-type.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Mitsui by employing positive-type uniaxial optical compensation films so that viewing angle is widened, as per the teachings of Arakawa.

Accordingly, claims 4 and 16 would have been obvious.

8. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsui as applied to claims 1 and 14 above and in view of Sugiyama et al., (Sugiyama), USPAT 5,757,455.

9. Mitsui differs from the claimed invention because he does not explicitly disclose that the alignment layer having a plurality of alignment direction over the first substrate.

Sugiyama discloses a liquid crystal display device having good visual angle characteristics including a first alignment film with a plurality of first alignment direction, where at least two of the plurality of first alignment directions is either perpendicular or parallel to one another (Fig. 6G), formed on the first substrate (col. 1, lines 63-64; col. 2, lines 5-13). Sugiyama further discloses that the method of manufacturing such a device includes a method of forming the alignment layer by either rubbing or exposing number of times in accordance with the number of alignment directions to polarize ultraviolet rays to form the alignment directions (col. 4, lines 28-49; col. 5, lines 26-28).

Sugiyama is evidence that ordinary workers in the art would find a reason, suggestion or motivation to form alignment layer having plurality of alignment direction by either rubbing or exposing the alignment layer to ultraviolet light.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Mitsui by forming alignment layers having plurality of alignment direction by either rubbing or exposing the layer to ultraviolet light in order to obtain good visual angle characteristics.

Accordingly, claims 20 and 21 would have been obvious.

Response to Arguments

10. Applicant's arguments with respect to claims 1, 4, 14, 16, 20 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) USPAT 5,594,568 is related to a liquid crystal display having a pair of positive-type uniaxial retardation films on one side of normally white liquid crystal layer.

b) USPAT 6,567,142, assigned to the common assignee discloses a reflective liquid crystal display device including a retardation film of two uniaxial films.

c) USPAT 6,362,862 is related to reflective-type liquid crystal display having two phase plates disposed on the viewer side of the liquid crystal display.

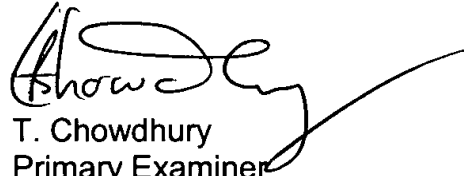
d) USPAT 6,417,892 discloses en optical compensation films formed of a stretched oriented polymer film are typically uniaxially positive-type.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury
Primary Examiner
Technology Center 2800

TRC
November 11, 2003